

18. Explain the following rearrangements

- (a) Baeyer Villiger oxidation (3)
- (b) Dienone-phenol (3)
- (c) Favorskii. (4)

19. Discuss the following reactions.

- (a) Wittig reaction (3)
- (b) Grignard reaction (3)
- (c) Michael addition. (4)

20. Explain the following reagents.

- (a) AIBN_n (3)
- (b) NaBH₃CN_n (3)
- (c) TEMPO (4)

NOVEMBER/DECEMBER 2025

**23PCH21 — ORGANIC REACTION
MECHANISM – II**

Time : Three hours

Maximum : 75 marks

SECTION A — (10 × 2 = 20 marks)

Answer ALL the questions.



1. Define the Saytzeff's rule.

- 2. Long-lived and short-lived free radicals. Give example for each.
- 3. What is an oxidative coupling reaction?
- 4. Write Wolff-Kishner reduction using an example.
- 5. Draw an example for Claisen rearrangement.
- 6. What is Benzidine rearrangement?
- 7. How the Prins reaction performed?
- 8. Define the Stobbe reaction.

9. What is Suzuki reaction?

10. Write Heck reaction.

SECTION B — ($5 \times 5 = 25$ marks)

Answer ALL questions.

11. (a) Explain the free radical reactivity on aliphatic and aromatic substrates.

Or

(b) Discuss the E_1 and E_2 mechanism with examples.

12. (a) Elaborate the mechanism of MPV reduction.

Or

(b) Explain the oxidizing reaction of DMSO.

13. (a) Describe Stevens and Wolf rearrangements.

Or

(b) Discuss the Pinacol-Pinacolone and Baker-Venkataraman rearrangements.

14. (a) Explain the organozinc and organolithium reagents with suitable examples.

Or

(b) Discuss the addition of carbene and electrophile to the carbon-carbon double bond.

15. (a) Explain LDA and DMAP reagents with examples.

Or

(b) Illustrate NBS and Baylis-Hillman reaction. (2+3)

SECTION C — ($3 \times 10 = 30$ marks)

Answer any THREE questions.

16. (a) Discuss syn and anti-elimination. (4)

(b) Discuss E_1CB mechanism. (4)

(c) How will you detect the free radical formation? (2)

17. Discuss the following reactions.

(a) SeO_2 (2)

(b) OsO_4 (2)

(c) DMSO- DCC_n (3)

(d) Bouveault Blanc reduction. (3)

